

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for reducing the evolution of hydrogen sulfide vapors within a sanitary sewer system, comprising the steps of:
 - (a) adding an iron salt to a wastewater stream within said sanitary sewer system upstream of hydrogen sulfide ~~volitilization~~ volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide; and
 - (b) adding deliberately an oxidant to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide.
2. (original) The method of claim 1 wherein said oxidant is hydrogen peroxide.
3. (original) The method of claim 1 wherein said iron salt is selected from the group consisting of ferrous chloride, ferrous sulfate, ferric chloride, ferric sulfate, and mixtures thereof.
4. (original) The method of claim 1 wherein said regenerated free iron ions are ferric ions.
5. (original) The method of claim 1, further comprising the step of adding an anionic polyelectrolyte to said wastewater stream at said wastewater treatment plant.
6. (currently amended) A method of enhancing solids separation in a primary clarifier comprising:
 - (a) adding an iron salt to a wastewater stream in a wastewater collection system upstream of hydrogen sulfide volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide;

(b) adding deliberately an oxidant to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide, which free iron ions react with said hydrogen sulfide to reform iron (II) sulfide; and

(c) adding deliberately an oxidant to said wastewater stream at the inlet of a wastewater treatment plant prior to entry of said wastewater to said primary clarifier.

7. (currently amended) A method of treating wastewater at a wastewater treatment plant comprising:

(a) adding an iron salt to a wastewater stream in a wastewater collection system upstream of hydrogen sulfide volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide;

(b) adding deliberately an oxidant to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide, which free iron ions react with said hydrogen sulfide to reform iron (II) sulfide; and

(c) adding deliberately an oxidant to said wastewater stream at the inlet of a wastewater treatment plant to regenerate free iron ions from said reformed iron (II) sulfide.

8. (canceled)

9. (currently amended) ~~A method for reducing the evolution of hydrogen sulfide vapors within a sanitary sewer system. The method according to claim 1, further comprising the steps step of:~~

~~adding an iron salt to a wastewater stream within said sanitary sewer system upstream of hydrogen sulfide volatilization to produce free iron ions which react with said hydrogen sulfide to form iron (II) sulfide;~~

~~making a first oxidant addition to said wastewater stream downstream of said iron salt addition to regenerate free iron ions from said iron (II) sulfide;~~

(c) adding deliberately an oxidant to said wastewater stream downstream of said ~~first oxidant addition by at least about 4 hours hydraulic retention time, and upstream of a wastewater treatment plant of step (b),~~

wherein the oxidant of step (c) may be the same oxidant as the oxidant of step (b) or may be a different oxidant than the oxidant of step (b).

10. (canceled)

11. (original) The method of claim 2 wherein said hydrogen peroxide is added to said wastewater stream in an amount of at least 1.0 lbs H₂O₂ per pound sulfide controlled.

12. (canceled)

13. (canceled)

14. (new) The method of claim 9, wherein said oxidant addition of step (c) occurs at or upstream of a wastewater treatment plant.

15. (new) The method of claim 1, wherein said oxidant is added to said wastewater stream in a stoichiometric amount of oxidant per pound sulfide controlled.

16. (new) The method of claim 2, wherein said hydrogen peroxide is added to said wastewater stream in a stoichiometric amount of oxidant per pound sulfide controlled.

17. (new) A method of delivering ferric iron into a wastewater treatment stream having iron (II) sulfide, comprising the step of adding an oxidant to said wastewater treatment stream, thereby oxidizing said iron (II) sulfide to ferric iron.

18. (new) The method of claim 17 wherein said oxidant is hydrogen peroxide.

19. (new) The method of claim 6 wherein said oxidant is hydrogen peroxide.

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20. (new) The method of claim 7 wherein said oxidant is hydrogen peroxide.